

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003189**Date Inspected:** 25-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower & OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**New Tower Shop Bay 1:**

The QA Inspector randomly observed ZPMC welder Xu Yan ID Number 052917, utilizing the Submerged Arc Welding (SAW) Process in the 1G Position (Flat Groove) with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3c-S to weld the fill pass in WJ SSD1-SA173A/K-14A on Tower Skin Plate E Sub-Assembly SA173(S). The QA Inspector randomly observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 660 amps, 32.5 volts with a travel speed of 580 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Xu Quishui ID Number 040489, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-2221-B-U3c-S to weld the fill pass in WJ SSD1-SA178C/D-24A on Tower Skin Plate B Sub-Assembly SA178(S). The QA Inspector randomly observed ZPMC CWI Xu Le Feng monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 665 amps, 32 volts with a travel speed of 580 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photographs provide additional detail.

**New Tower Shop Bay 2:**

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The QA Inspector randomly observed ZPMC welder Liu Wei ID Number 048532, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-P-2111 to attach Lifting Lugs to Tower Skin Plate E Sub-Assembly SA216(E) Longitudinal Stiffener E5 near butt splice at WJ ESD1-SA216G/K-20A. The QA Inspector randomly observed ZPMC CWI Jiang Jian Fei monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Cao Guimei ID Number 047304, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-2321-B-U3c-S, to weld the fill pass in WJ ESD1-SA227A/H-52A in Tower Skin Plate E Sub-Assembly SA227(E) Longitudinal Stiffener (E-6) butt splice. The QA Inspector randomly observed ZPMC CWI Jiang Jian Fei monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 640 amps, 32.7 volts with a travel speed of 615 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

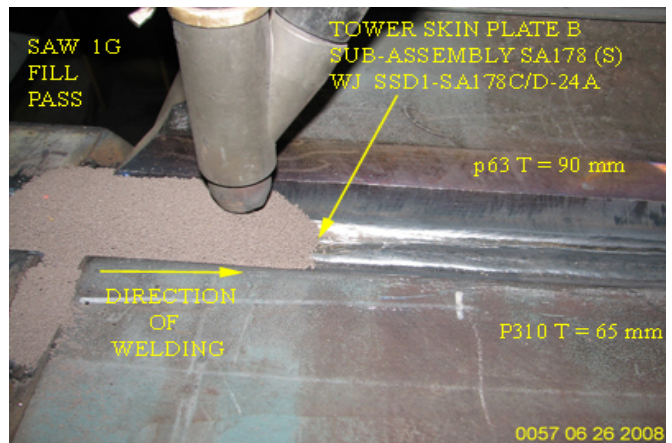
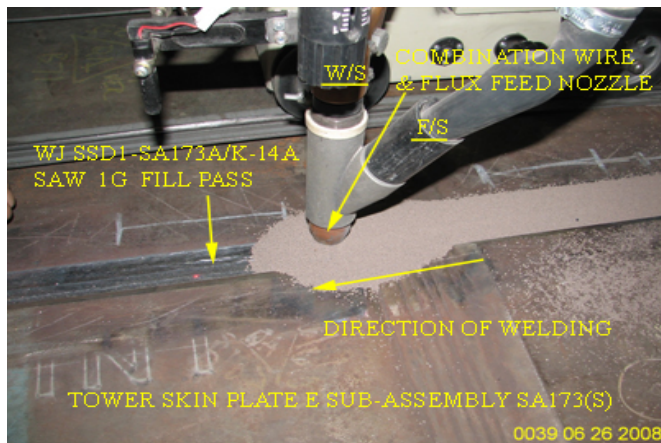
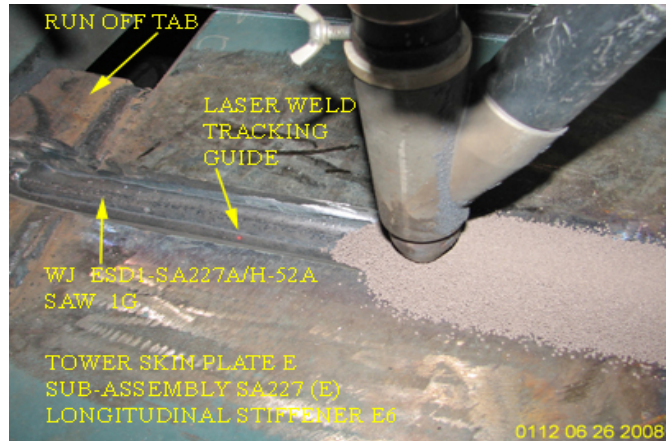
The QA Inspector randomly observed ZPMC welder Yang Meizhen ID Number 042195, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-2321-B-U3c-S, to weld the fill pass in WJ ESD1-SA227A/F-53B in Tower Skin Plate E Sub-Assembly SA227(E) Longitudinal Stiffener (E-5) butt splice. The QA Inspector randomly observed ZPMC CWI Jiang Jian Fei monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 648 amps, 32.8 volts with a travel speed of 608 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC welder Liu Wei ID 048532, utilizing the Carbon Air Arc Gouging Process to gouge V-Groove in Run On/Run Off Tabs at the start and stop ends of WJ ESD1-SA216G/K-20A Tower Skin Plate E Longitudinal Stiffener splice.

The QA Inspector randomly observed ZPMC welder Yun Chuan Jin ID Number 0503060, utilizing the SAW Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-2221-B-U3c-S-1(PJP) and WPS-B-T-2321-B-P3-S-1, to weld the root pass in WJ SSD1-SA40B/E-2(PJP), B/E-3B(CJP), C/E-2(PJP) B/E-4B(CJP), C/E-31(PJP) and C/E-32B(CJP) Tower Skin Plate D Sub-Assembly SA40(S). The QA Inspector randomly observed ZPMC CWI Lin Hua Jie monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 524 amps, 29.7 volts with a travel speed of 430 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

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## Summary of Conversations:

There were no relevant conversations.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Josh Ishibashi 13764710411, who represents the Office of Structural Materials for your project.

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**Inspected By:** Franco,Charlie

Quality Assurance Inspector

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**Reviewed By:** Carreon,Albert

QA Reviewer